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ABSTRACT

The theoretical landscape in which scholars of comparative education work has become increasingly diverse and fragmented in recent years. This paper contends that cognitive maps can enable scholars to see better this shifting landscape. Mapping also is offered as a rationale by which social and intellectual worlds may be uttered and constructed in different ways according to different principles of vision and division. It is contended that failing to map the array of positions within the theoretical landscape prevents scholars from seeing more objectively their own vantage points and how their own perspectives relate to those of others. To illustrate the utility of such mapmaking, the changing ways of seeking comparative and international education through both textual analysis and the use of four figures or maps are examined. The changing representations of knowledge in the field since the 1950s, paradigms and theories today, and how diverse knowledge constructs may be mapped at micro and macro levels of social reality are reviewed and discussed. (DB)

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A COGNITIVE MAPPING OF VISION AND DIVISION IN COMPARATIVE EDUCATION TEXTS

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"Without macro-theories that attempt to cognitively map the new forms of social development and relations . . . we are condemned to live among the fragments. Cognitive mapping is therefore necessary to provide theoretical and political orientation as we move into a new and confusing social terrain."[1]

"The basic idea of phenomenography is that each phenomenon can be experienced or conceptualized in a limited number of qualitatively different ways, and it is the task of phenomenography to map these possible understandings."[2]

Over the past several decades, knowledge constructs in comparative education, as in related fields, have become increasingly diverse and fragmented. Older knowledge communities have responded to critique and struggled to become neo-variants. New theoretical discourses have emerged and offer different and often contradictory ways of seeing and knowing. Occasional efforts to justify and defend earlier knowledge monopolies have failed as have take-over attempts to establish new monopolies. Today, no one worldview or way of knowing can claim to fill all the space of vision or knowledge.

Rather, it would seem we are in for an extended period of learning to work together as a diverse yet interactive global community of scholars. This situation suggests a continuing need for goodwill, translation, and cognitive maps to help us see a shifting theoretical landscape. While the need for maps is apparent, attempts at actual map-making have been few. This paper offers examples of the utility of theory mapping as semiotic representation, as a kind of cognitive art or "play of figuration" to help orient comparative educators as they face challenging new intellectual and representational tasks.

This mapping rationale also argues that social and intellectual worlds may be uttered and constructed in different ways according to different principles of vision and division, that failing to construct the space of positions leaves you no chance

of seeing the point from which you see what you see.[3] Moreover, as the struggle over classifications, such as maps is a fundamental dimension of cultural and class relations, to change the world--and here the study draws heavily on work by Pierre Bourdieu and Nelson Goodman--one has to map and change the ways of world making, that is, the vision of the world and the practical operations by which groups are produced and reproduced.

More specifically, the paper examines changing representations of knowledge in the field since the 1950s (see Figure 1), identifies paradigms and theories today (see Figure 2), and suggests how diverse knowledge constructs may be mapped at macro (see Figure 3) and micro (see Figure 4) levels of social reality. Here I am guided by Bourdieu's notion of "habitus" where intellectual fields are construed as systems of "durable, transposable dispositions" produced by dialectical interaction with objective structures and actors' views of the world.[4]

To reveal such dispositions, I use Barthes' notion of text, as an arrangement in a certain order, as "that social space that leaves no language safe or untouched, that allows no enunciative subject to hold the position of judge, teacher, analysis confessor, or decoder" (p. 51). This decentering approach is a political and intellectual practice that interprets comparative education texts in relation to other texts, rather than in relation to their authors. A distinction between the work and the text may also be helpful. Literary works are concrete and visible while the text reveals and articulates itself according to and against certain rules. Where the work is held in the hand, the text is held in language. Here the original modernist linking of subject (author) and object (work) is replaced with practices (writing) and the intertextual (field). This relationship of the text to its intercultural field, as illustrated in Figures 3 and 4, is creative, active, and practical. Texts are seen to interact continuously in an open field which they produce and by which they are produced, and in which they may be variously typed and mapped.[5]

1. Changing Representations of Knowledge

While comparative educators only began to discuss explicitly their theoretical framing dispositions following the appearance of Thomas Kuhn's magnum opus, *The Structure of Scientific Revolutions* in 1962, implicit knowledge perspectives can be identified in work of the field's founding fathers. The 18th and 19th Century foundational texts of Berchtold, Jullien and Basset, for example, all advocate encyclopedic description and macro historical comparisons of public instruction in order to generalize on its efficiency in the then emergent project of individual and social modernity. With the ensuing construction of national systems of education in the industrial, or modern world, and their transfer to the colonized world, comparative educators shifted their attention to the study of social forces and contexts in the shaping and differentiation of these systems. By 1950, the work of Sadler, Kandel and Hans--among others--helped to consolidate the functionalist paradigm as the dominant, even if implicit and unspoken, way of representing or

modeling national and crossnational educational phenomena.

Figure 1 below seeks to capture textual knowledge orientations in exemplar comparative education scholarship during three major periods: i.e., in the 1950s and 1960s when functionalist and positivist orthodoxy dominated; in the contentious 1970s and 1980s when the radical functionalist, humanist and radical humanist paradigms challenged orthodoxy and unresolved heterodox struggles prevailed; and in the emergence of a more heterogeneous period (with the somewhat reluctant acceptance of the complementarity of different paradigms) as we move into the 1990s. To facilitate comparison, Figure 1 distinguishes between eight kinds--or directions--of hermeneutic reference within the texts noted, i.e., knowledge control and organization; knowledge and ontology, framing, and style; knowledge and gender/emotions; and knowledge products.[6] Textual representations in comparative education, it might be noted, have for over a century rather closely tracked the ascendancy of the functionalist paradigm in sociology, in social anthropology, in political science, and in modernization and human capital theories, if at a usual time lag of a decade or so.

1.1 Orthodoxy

Following World War II with the crises of decolonization and cold war competition, comparative education studies--and especially those in North America--continued to be framed in evolutionary and functionalist perspectives while moving closer to the social sciences and their concerns to explain and inform social and economic development using the vocabulary, if not the rigor, of the natural sciences. The florescence of comparative and international education studies during these decades of functionalist and positivist orthodoxy also drew strength from the creation of scholarly journals in the field, an increase in governmental and foundation support, and the founding of numerous comparative education centers in leading US and European universities.

At the Comparative Education Center at the University of Chicago, for example, Arnold Anderson, the first director, argued in a foundational text that the ultimate aim of comparative education is--as with the social sciences--systematic knowledge of causation, i.e., the shaping of the results of analysis into law-like generalizations. Where earlier educational research and educational psychology programs had gained entrance and eventual methodological respectability in European and North American higher education using statistical and experimental methods, Anderson proposed that comparative education should seek acceptance with a strategy of: 1) integration with the social sciences; 2) the use of the natural sciences model of hypothesis testing and analysis of co-variation; 3) a commitment to theoretical explanation and generalization, and 4) a conservative, if implicit, political bias.[7] Over a decade later, Anderson continued to predict progress in the identification of "functional equivalents for the basic structures and functions of educational systems." He admonished, however, that the price of "progress" would require the exclusion of competing paradigms: "Perhaps, we should cease to speak of

Characteristics of Textual Representations	Linear 1950s - 1960s	Branching 1970s - 1980s	Intertwined 1990s -
Knowledge Control and Organization:	Orthodoxy; hierarchial and centralized	Heterodoxy: Emergence of "neo-" variants and new inquiry perspectives	Heterogeneity: Disputatious yet complementary knowledge communities
Knowledge Relations:	Hegemonic and totalizing	Paradigm clash -- i.e., "either/or" competition of incommensurable world views	Emergent post-paradigmatic -- i.e., rhizomatic and interactive
Knowledge Ontology:	Realist views predominate	Realist and relativist views contest reality	More perspectivist views encompass multiple realities & perspectives
Knowledge Framing:	Functionalism and positivism dominant	Functionalist, critical and interpretive views compete and decenter	More eclectic, reflexive and pragmatic
Knowledge Style:	Parsimonious and value-free	Agonistic and partisan	Increasingly intertextual, ecologistic, & contingent
Knowledge/Gender:	Maleness: Logic dominant	Feminist ideas emerge, compete, decenter	Gender issues more open and indeterminate
Knowledge/Emotions:	Optimism and confidence	Disdain, incredulity, or exhilaration	Ambivalence -- i.e., nostalgia for certainty; delight in diversity
Knowledge Products:	Law-like crossnational statements the ideal	Competing ideologies	Explanation, interpretation, simulation, translation and mapping
Illustrative Texts:	Adams & Farrell (1969); Anderson (1961); Bereday (1964); Husén (1967); Noah & Eckstein (1969); Schultz (1961)	Anderson (1977); Bourdieu & Passeron (1977); Bowles & Gintis (1976); Carnoy (1984); Clignet (1981); Epstein (1983); Heyman (1979); Husén (1988); Karabel & Halsey (1977); Kelly & Nihlen (1982); Paulston (1977)	Altbach (1991); Cowen (1990); Lather (1991); Masemann (1990); Paulston (1990; 1993); Paulston & Tidwell (1992); Rust (1991); Stromquist (1990); von Recum (1990)

FIGURE 1: CHANGING REPRESENTATIONS OF KNOWLEDGE IN COMPARATIVE AND INTERNATIONAL EDUCATION TEXTS, 1950s - 1990s

society as a 'seamless web' and see it rather as a matrix of .5 correlation coefficients. Accordingly, holistic conceptions of society should be espoused with heavy qualifications, even when we would do not put conflict at the center of our conceptual scheme."[8]

1.2 Heterodoxy

By the early 1970s, functionalist theory and positivist methods had achieved the status of orthodoxy in comparative and education studies at the same time they came under attack in the social sciences and in development studies from a combination of emergent critical and interpretive knowledge communities. Reasons for the vulnerability and eventual decentering of functionalism in the 1970s and 1980s are suggested in the shift from a segregated to a plural society in the U.S. With cultural pluralism came epistemological and ontological pluralism. Functionalist theory, moreover, proved unable to adequately predict or control frequent development failures.[9] Equally important, the rise of a global field with numerous new scholars and comparative education programs in Europe, Asia and the Third World saw the emergence of antithetical neo-marxist, critical theory, feminist, and dependency perspectives to challenge the ideas and legitimacy of structural-functionalist orthodoxy.[10]

1.3 Emergent Heterogeneity

Representations of knowledge in comparative education texts began a shift away from ideological confrontation and heterodoxy in the late 1980s.[11] While a few researchers still claim orthodox purity and remain within their exclusive paradigmatic utopias--and many continue unsuccessful partisan efforts to replace one worldview with another--the collapse of grand theory in the social sciences means that today no one knowledge community can claim a monopoly of truth or claim to fill all intellectual space.[12] Rather, a growing number of researchers see all claims to universal, foundational knowledge--be they grounded in positivist "science," or interpretivist "science," or Marxist "science"--as incomplete and problematic.[13]

Husén, for example, has pointed the way past heterodoxy with his recognition that no one paradigm can answer all questions, that all serve to complement supposedly conflicting and incommensurable worldviews.[14] Paulston sees the field moving from paradigm wars to a new and confused terrain of disputatious yet complementary communities as the use of knowledge becomes more eclectic and reoriented by new ideas and new knowledge methods in, for example, interpretations, simulations, translations, probes, and conceptual mapping.[15] Knowledge has become more "textual." It is increasingly seen as construction employing a conventional sign system where even non-book texts such as icons, architectural structures, musical compositions, or graphic texts such as maps are seen to "presuppose a signifying consciousness that it is our business to uncover."[16] With the appearance of feminist, post-structural and post modern studies, among others, comparative education discourse has also begun this excavation[17] with a shift in knowledge framing perspectives from traditional natural and social science models to those of the interpretive humanities and linguistics.[18]

2. Intellectual Communities Today

Figure 2 below presents a heuristic taxonomy or synchronic mapping of knowledge perspectives in the field today. Four major root paradigms, or world-views, are identified--i.e., the functionalist, the radical functionalist, the radical humanist, and the humanist. Some 21 branching theories drawing upon one or more paradigms are identified and linked citing a number of illustrative texts. Together, the interaction of paradigms and theories within texts can be seen as a dynamic intellectual field. While this figure may capture something of the range and diversity of present knowledge perspectives in the field, it can only suggest the intense eclectic borrowing currently taking place across intellectual communities--not only in comparative education, but in almost all areas of intellectual work. In Figures 3 and 4 some indication of this knowledge interaction and growth will be presented via the phenomenographic mapping of knowledge relations at macro/ metatheoretical, and micro/practice levels.

Phenomenography is about the qualitatively different ways in which people experience or think about various phenomena, about the relations between human beings and their world. In comparative education, phenomenographic studies have sought, as in this work, to characterize how researchers see, apprehend, and think about knowledge constructs such as "paradigms and theories" at different times and in different knowledge cultures and subcultures. Through textual analysis, this phenomenographic study seeks not to describe things "as they are," but how they have been presented as sedimentations of ways of thinking about the world. Accordingly, categories of description (as in Figures 1, 2, 3 and 4) are seen as a form of discovery and as the main outcomes of such research activity. Comparison of alternative perspectives seeks to identify distinctive characteristics or essential structures of each conceptualization so they may be described and mapped--as in Figure 2 below.[19]

3. Mapping Knowledge Perspectives

Earlier examples of mapping knowledge in comparative and international education texts can be seen in Anderson (1961 and 1977), where implicitly structural functionalism occupied all space; in Paulston (1977), where polarized equilibrium and conflict paradigms enclosed equal space; in Epstein (1983), where three distinct and supposedly irreconcilable paradigms labeled "neo-positivist," "neo-marxist," and "neo-relativist" contested space; in Adams' (1988) presentation of Burrell and Morgan's boxy and "frozen" multidimensional typology; and in the interactive typologies, or "maps" presented in this study.[20]

In Figure 3, the four pradigms and 21 theories identified and presented as taxonomy in Figure 2 are now presented in heuristic fashion as a macro intellectual field. The four paradigmatic nodes are derived from intra-textual and cross-textual analysis. Textual dispositions regarding social and educational change (the verticle dimension) and characterization of reality (the horizontal dimension) are the coordinates used to type and locate texts within the field.

Root Paradigms/ World Views	Branching "Theories"	Illustrative Texts
Functionalist *"Must be"*	Modernization/Human Capital	Boli & Meyer (1985); Coombs (1985); Schultz (1989)
	Neofunctionalist	Adams (1988); Plank (1990); Rondinelli et al. (1990)
	Rational Choice/Micro-Macro	Coleman (1987); Turner (1988)
	Conflict Theory	Archer (1984); Bourdieu & Passeron (1977); Paulston (1980); Weiler (1989)
	Dependency	Altbach (1989); Arnove (1980)
Radical Functionalist *"Will be"*	Historical Materialist	Althusser (1990); Bowles & Gintis (1976); Schrag (1986)
	Neomarxist/Postmarxist	Carnoy (1984); Carnoy & Samoff (1990)
	Cultural Rationalization	Habermas (1987); Weiler (1983); Welsh (1991)
Radical Humanist *"Can be"*	Critical Theory/Critical Ethnography	Avalos (1986); Foley (1991); Weis (1990)
	Feminist	Kelly & Nihlen (1982); Lather (1991); Stromquist (1989; 1990)
	Poststructuralist/Postmodernist	Cherryholmes (1988); Rust (1991); von Recum (1990)
	Pragmatic Interactionist	Holmes (1988); Husén (1988); Paulston & Rippberger (1991)
Humanist *"Be-ing"*	Ethnographic/Ethnological	Gibson & Ogbu (1991); Spindler & Spindler (1987)
	Phenomenographic/Ethnomethodological	Clignet (1981); Heyman (1979); Paulston (1992; 1993)

FIGURE 2: A HEURISTIC TAXONOMY OF KNOWLEDGE PERSPECTIVES IN COMPARATIVE AND INTERNATIONAL EDUCATION TEXTS

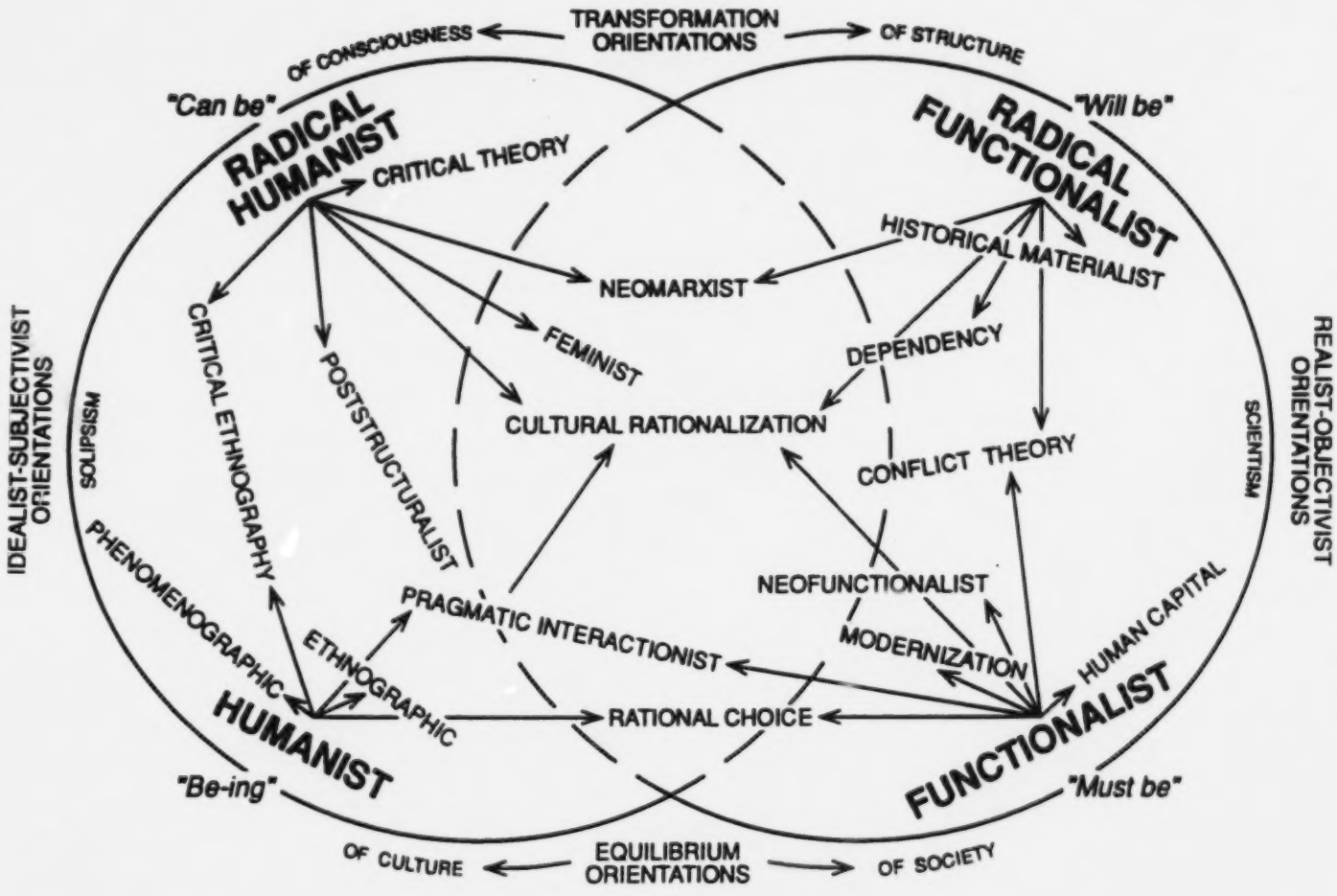

FIGURE 3: A MACRO MAPPING OF PARADIGMS AND THEORIES IN COMPARATIVE AND INTERNATIONAL EDUCATION SEEN AS AN INTELLECTUAL FIELD

Source: See texts cited in Figures 1 & 2

Arrows suggest the drection and extent of communal borrowing and interaction. Several advantages of the figure may be noted. It facilitates, for example, the reinscription and resituation of meanings, events and objects in the field within broader movements. It suggests a dynamic and rhizomatic field of tangled roots and tendrils. Comparative education is now seen as a mapping of the eclectic interweavings of knowledge communities rather than the more objectified images presented to the world in earlier foundational texts. The strength of social theory in the field today is in fact firmly grounded in this very multiplicity of its perspectives and tools known through intertextual composition.[21]

Simultaneously, in cataloging and typologizing knowledge communities and relations, Figures 1, 2, 3 and 4 order and discipline this world, discover hierarchies and represent an act of control. They introduce into complex systems a representation of their own complexity. Yet, even with disclaimers of heuristic intent, maps as interpretive constructs are also clearly an act of power and should be so understood.

The paradox here is that conceptual mapping can create both distorted, authoritarian images, as well as new tools to challenge orthodoxy and the epistemological myth of cumulative scientific or materialist progress. Mapping offers comparative educators a valuable tool to capture the rhetoric and metaphor of texts, to make the invisible visible, and to open a way for intertextuality among competing discourses.[22] And--when needed--they provide a way to see all knowledge thoroughly enmeshed in the larger battles that constitute our world space. We should also note that maps are practical. They provide heuristic orientation to and in practice, and they help us see and organize proliferating intellectual communities producing an ever expanding textual discourse.[23]

Figure 4 presents a textually derived micro mapping of paradigmatic worldviews and theoretical perspectives entering into and intertwined in a specific educational reform practice. This visual representation, in contrast to Figure 3, describes educational practice via textual exegesis at a particular time and place--i.e., in Nicaraguan higher educational reform efforts in the early 1980's. Here practice is viewed as a hermeneutic circle where major stakeholders in the reform practice bring their guiding worldviews, ideas and theoretical perspectives into a goal oriented interactive educational change process.[24] Figure 4 suggests energy, behavior and accomplishments within the context of everyday life rather than, as in Figure 3, a systemic global juxtaposition of the sources of intellectual energy identified in paradigmatic exemplars and the interaction of theoretical perspectives. With such maps of both ends of the micro-macro continuum, comparative educators can now move beyond false dichotomies and arbitrary oppositions to situate themselves within the dynamic intellectual field in which they are players. In so doing they will help to make comparative education a more reflexive discipline whose subject matter increasingly encompasses itself. And as reflexive scholars, they gain the self-knowledge that Bourdieu sees as providing "an extraordinary autonomy, especially when you don't use it as a

GLOBAL CHANGE ORIENTATIONS
CRITICAL THEORY AND LIBERATION THEOLOGY THEORY
(i.e., reform as transformation of consciousness for "empowerment" & "liberation": Sandinista Christian Marxists)
REVOLUTIONARY SOCIALIST THEORY
(i.e., reform as structural transformation for "social evolution": Sandinista and Cuban Orthodox Marxists)
IDEALIST-SUBJECTIVIST ORIENTATIONS
REALIST-OBJECTIVIST ORIENTATIONS
FORMULATION
IMPLEMENTATION
REFLECTION
EVALUATION
REFORM PRACTICE
GRASSROOTS THEORY
(i.e., reform as cooperation and self-help for "participatory development": LASPAU, NGOs and volunteers)
MODERNIZATION THEORY
(i.e., reform as structural innovation for social efficiency and "progress": USAID)
INCREMENTAL CHANGE ORIENTATIONS

FIGURE 4: A MICRO MAPPING OF EDUCATIONAL AND SOCIAL CHANGE THEORIES IN NICARAGUAN HIGHER EDUCATION REFORM PRACTICE

Source: Paulston & Rippberger (1991)

weapon against others, or as an instrument of defense, but rather as a weapon against yourself, as an instrument of vigilance."[25]

Conclusion

This study has used textual analysis and phenomenographic method to examine changing ways of seeing comparative and international education--i.e., over time as history; as a synchronic taxonomic structure; and as conceptual maps, both at macro and micro levels. Three major views of knowledge relations in the field are identified as the orthodox, the heterodox, and the emerging heterogeneous. Divergent and convergent trends across knowledge communities are also identified and discussed noting that comparative educators and their texts are becoming more reflexive and eclectic thus allowing new theory and new mapping opportunities to emerge from combinations of existing theories, and the spatial conflicts of our time.

FOOTNOTES/ENDNOTES

1.Kellner, D. (1990). "The Postmodern Turn: Positions, Problems, and Prospects." In G. Ritzer, (Ed.), *Frontiers of Social Theory: The New Syntheses* (pp. 281-282). New York: Columbia University Press.

2.Marton, F. (1988). "Phenomenography: Exploring Different Conceptions of Reality." In D.M. Fetterman (Ed.), *Qualitative Approaches to Evaluation in Education* (196). New York: Praeger.

3.We may note that theory, or *theorein* in Greek, originally meant to see--that is, the imposition of a vision of divisions.

4.For a summary of Bourdieu's (1989) dialectical combination of subjectivist and structuralist perspectives to construct an interactive field of power relations, see his "Social and Symbolic Power." *Sociological Theory*, 7, 14-25. Bourdieu's mapping rationale argues that the social and intellectual worlds may be uttered and constructed in different ways according to different principles of vision and division, that failing to construct the space of positions leaves you no chance of seeing the point from which you see what you see. Nelson Goodman's distinction between "rendering"--i.e., not just what a draftsman does but all the ways of making and presenting worlds--and "rightness", either ethical or moral may also be useful. See his stimulating little book, *Ways of Worldmaking* (1978). Cambridge: Hackett. Goodman rejects current trends towards "mystical obscurantism, anti-intellectual intuitionism, and anti-scientific humanism." He chooses instead to base his study of "countless worlds made from nothing by the use of symbols" on attitudes found in the work of Ernst Cassirer, i.e., a skeptical, analytic, and constructionalist orientation.

5.Barthes, R. (1979). "From work to text." In J. Hariri, (Ed.), *Textual strategies: Perspectives in poststructural criticism* (pp. 48-63). Ithaca: Cornell University Press. Barthes argues that textual understanding is related to social and political understanding. Where positivist science has traditionally viewed language as a transparent instrument or tool devoid of ideational or practical content, literary theory sees language as opaque and seeks to penetrate this opacity in order to recover the commitments and practices contained in language. Barthes' choice is to see this reading as mythic. Others have seen readings as "violent" (Foucault), "political" (Jameson) "rhetorical" (Gadamer); or "ludic" (Baudrillard). Orientations to textual exegesis are covered in M. Shapiro (1984), "Literary production as a politicizing practice." In M. Shapiro (Ed.), *Language and politics* (215-254). New York: New York University Press. For a discussion of multi-dimensional mapping of works using author cocitation analysis, see K.W. McCain, (1990) "Mapping authors in intellectual space: A technical overview." *Journal of the American Society for Information Science*, 41(6), p. 433-444 and A.E. Bayer, et al., "Mapping intellectual structure of a scientific subfield through author cocitations. *Journal of the American Society for Information Science*, 41(4), pp. 444-452. This technique does not enter into

the ideas in the text. Rather, it generates association patterns of authors and works in the form of a useful if somewhat superficial bibliometric network analysis.

6.Illustrative texts of the 1950s and 1960s are: Adams, D. & Farrell, J. (1959). "Societal differentiation and educational differentiation." *Comparative Education* 5, pp. 249-262; Anderson, C. (1961). "The methodology of comparative education." *International Review of Education* 7, pp. 1-23; Bereday, G. (1964). *Comparative method in education.* New York: Holt, Reinhart and Winston; Husén, T. (Ed.). (1967). *International study of achievement in education: A comparison of twelve countries.* Stockholm: Almquist and Wiksell; Noah, H. & Eckstein, M. (1969). *Toward a science of comparative education.* New York: Macmillan; and Schultz, T. (1961). "Education and economic growth." In N. Henry (Ed.), *Social forces influencing American education* (pp. 46-88). Chicago: University of Chicago Press.

Texts from the 1970s and 1980s are Anderson, C. (1977). "Comparative education over a quarter of a century: Maturity and challenges." *Comparative Education Review*, 21, pp. 405-416; Bourdieu, P. & Passeron, J. (1977). *Reproduction: In culture, education, society.* Beverly Hills: Sage; Bowles, S. & Gintis, H. (1976). *Schooling in capitalist America.* New York: Basic Books; Carnoy, M. (1984). "Marxism and education." In B. Ollman & E. Vernoff (Eds.), *The left academy: Marxism on American campuses* (pp. 79-98). New York: Praeger; Clignet, R. (1981). "The double natural history of educational interactions: Implications for educational reforms." *Comparative Education Review*, 25, pp. 330-352; Epstein, E. (1983). "Currents left and right: Ideology in comparative education." *Comparative Education Review*, 27, pp. 3-29; Heyman, R. (1979). "Comparative education from an ethnomethodological perspective." *Comparative Education*, 15, pp. 241-249; Husén, T. (1988). "Research paradigms in education." *Interchange*, 19, pp. 2-13; Karabel, J. & Halsey, A. (Eds.). (1977). *Power and ideology in education.* London: Oxford University Press; Kelly, G. & Nihlen, A. (1982). "Schooling and the reproduction of patriarchy." In M. Apple, (Ed.), *Cultural and economic reproduction in education* (pp. 162-180). London: Routledge and Kegan Paul; and Paulston, R. (1977). "Social and educational change: Conceptual frameworks." *Comparative Education Review*, 21, pp. 370-395.

Texts from the 1990s are Altbach, P. (1991). "Trends in comparative education." *Comparative Education Review*, 35, pp. 491-507; Cowen, R. (1990). "The national and international impact of comparative education infrastructures." In E. Halls (Ed.), *Comparative education: Contemporary issues and trends.* Paris: UNESCO; Lather, P. (1991). *Getting smart: Feminist research and pedagogy within the post-modern.* London: Routledge; Masmann, V. (1990). "Ways of knowing: Implications for comparative education." *Comparative Education Review*, 34, pp. 465-473; Paulston, R. (1993). "Comparative and international education: Paradigms and theories." In *International encyclopedia of education.* Oxford: Pergamon Press; Paulston, R. & Tidwell, M. (1992). "Latin American education--comparative." In *AERA Encyclopedia of Education.* New York: McMillan; Rust, V. (1991). "Postmodernism and its comparative education

implications." *Comparative Education Review*, 35, pp. 610-626; Stromquist, N. (1990). "Gender inequality in education: Accounting for women's subordination." *British Journal of Sociology of Education*, 11, pp. 137-154; and von Recum, H. (1990). "Erziehung in der post-moderne" (Education in the postmodern period). *Die politesche Meinung*, 237, pp. 76-93.

7.Anderson, C. (1961). *International Review of Education,* pp. 1-23.

8.Anderson, C. (1977). p. 413. The first major pluralist attack on attempts to enclose the field in functionalist logic and scientistic methods was made by R. Lawson in his 1975 presidential address, "Free-Form Comparative Education" 19 (1975), 345-353. Lawson opposed "the application of a political religion to social science," the denial of legitimate opposition and the enclosure of all scholarly activity within an orthodoxy of narrow political and paradigmatic parameters (pp. 345-346).

9.Klees, S. (1991). "The economics of education: Is that all there is?" *Comparative Education Review*, 35 pp. 721-734.

10.The emergence of a global comparative education field is well documented in R. Arnove, P. Altbach, & G. Kelly (Eds.), (1992). *Emergent issues In education: Comparative perspectives*. Albany: SUNY Press, Passim.

11.Altbach, P. *Trends in comparative education* (pp. 504-506). For a continuation of this movement , see Paulston, "Ways of Seeing," pp. 177-202.

12.See, for example, the 1990 debate in "Colloquy on comparative theory." *Comparative Education Review*, 34(3), pp. 369-404.

13.See Rust, pp. 614-616.

14.Husén, *Research Paradigms* (pp. 10-12).

15.Paulston, *Comparative and international education* (pp. 254-255).

16.Barthes, R., p. 61.

17.See Cherryholms, C. (1988). *Power and criticism: Post-structural investigations in education*. New York: Teachers College Press); von Recum, pp. 12-16; and Rust, pp. 622-624.

18.See, for example, Geertz, C. (1983). *Local knowledge*. New York: Basic Books, 1983; and Habermas, J. (1987). *The theory of communicative action* (Vol. 2). Boston: Beacon.

19.Marton (1988) argues that the initial finding of categories is a form of discovery that does not have to be replicable. Once found, however, intersubjective agreement among other researchers will be required if types are to be widely used.

Illustrative texts used to construct Figure 2 are Boli, J. & Meyer, J. (1985). "Explaining the origins and expansion of mass schooling." *Comparative Education Review*, 29, pp. 145-170; Coombs, P. (1985). *The world crisis in education.* London: Oxford University Press; Schultz, T. (1989). "Investing in people: Schooling in low income countries." *Economics of Education Review*, 8, pp. 219-240; Adams, D. (1988). "Expanding the educational planning discourse." *Comparative Education Review*, 32 pp. 400-415; Plank, D. (1990). "The politics of basic educational reform in Brazil." *Comparative Education Review*, 34, pp. 538-560; Rondinelli, D., Middleton, J., & Vespoor, A. (1990). *Planning educational reforms in developing countries.* Durham: Duke University Press; Coleman, J. (1987). "Micro-foundations and macro-social behavior." In J. Alexander, B. Geisen, R. Munch & N. Smelser (Eds.), *The micro-macro link* (pp. 153-173). Berkeley: The University of California Press; Turner, D. (1987). "Problem solving in comparative education." *Compare*, 17, pp. 110-121; Archer, M. (1984). *Social origins of educational systems.* London: Sage; Bourdieu, P. & Passeron, J. (1977); Paulston, R. (1980). "Education as anti-structure: Nonformal education in social and ethnic movements." *Compare*, 10, pp. 55-66; Weiler, H. (1989). "Why reforms fail: The politics of education in France and the Federal Republic of Germany." *Journal of Curriculum Studies*, 21, pp. 291-305; Altbach, P. (1989). "Twisted roots: The western impact on Asian higher education." *Higher Education*, 18, pp. 9-29; Arnove, R. (1980). "Comparative education and world system analysis." *Comparative Education Review*, 24, pp. 48-62; Althusser, (1990); Bowles & Gintis, (1976); Schrag, P. (1986). "Education and historical materialism." *Interchange* 7, pp. 42-52; Carnoy, (1984); Carnoy, M. & Samoff, J. (1990). *Education and social transition in the third world.* Princeton: Princeton University Press, 1990; Habermas, J. (1987); Weiler, H. (1983). "Legalization, expertise and participation: Strategies of compensatory legitimation in educational policy." *Comparative Education Review*, 27, pp. 259-277; Welsh, A. (1991). "Knowledge and legitimation." *Comparative Education Review*, 35, pp. 508-531; Avalos, B. (1986). *Ensenando a los hijos de los pobres: Un estudio ethnográfico en América Latina* (Teaching the children of the poor: An ethnographic study in Latin America). Ottawa: International Education Research Center; Foley, D. (1991). "Rethinking school ethnographies of colonial settings: A performance perspective of reproduction and resistance." *Comparative Education Review*, 35, pp. 532-551; Weis, L. (1990). *Working class without work: High school students in a de-industrializing economy.* London: Routledge, Chapman and Hall; Kelly & Nihlen, (1982); Lather, (1991); Stromquist, (1989) & (1990); Cherryholms, (1988); Rust (1991); von Recum, (1990); Holmes, (1988); Husén, (1988); R. Paulston & S. Rippberger, (1991). "Ideological pluralism in Nicaraguan university reform." In M. Ginsburg (Ed.), *Understanding educational reform in global context* (pp. 179-200). New York: Garland; Gibson, G. & Ogbu, J. (1991). *Minority status and schooling: A comparative study of emigrant and involuntary minorities.* New York: Garland; Spindler, G. & Spindler, L. (1987). *Interpretive ethnography of*

education: At home and abroad. Hillsdale: Erlbaum; Clignet, (1981); Heyman, (1979); Paulston, (1992).

20.See Anderson, "Methodology of comparative education," pp. 20-21; Paulston, *Social and educational change*, pp. 372-373; Epstein, pp. 5 and 6; and Adams, p. 409.

21.For a discussion of maps as socially embedded discourse see B. Harley's highly original essay, "Maps, Knowledge, and Power." In D. Cosgrove & S. Daniels (Eds.), (1988). *The iconography of landscape: Essays on the symbolic representation, design, and use of past environments* (pp. 123-138). New York: Cambridge University Press, 1988. Some two decades ago, P. Berger argued for a fundamental recomposition of the "mode of narration" arising from the need to take into account the simultaneity and extension of events and possibilities to make sense of what we see using spatial fields of insight. See, Berger, P. (1972). *Ways of seeing*. London: Penguin Books.

22.For related attempts using figural space to map cognitive constructs, see for example, Hampden-Turner, C. (1982). *Maps of the mind.* New York: Macmillan, with 60 maps that combine text and visuo-spatial imagery; and Lynch, M. (1991). "Pictures of nothing? Visual construals in social theory." *Sociological Theory*, 9, pp. 1-21 where the author draws upon ethnomethodological and social constructivist studies of representation in the natural sciences. He finds that labels, geometric boundaries, vectors and symmetries (as found in Figures 3 and 4) may be used as "rhetorical mathematics" to convey and impression of rationality. While such "theory pictures" may show little beyond what a text says in its writing, they are valuable in their ability to simulate a hermeneutic passage from written ideas to an independent representational or mathematical space. Here maps can provide an independent "work space" that reflexively informs a reading and makes possible the representation of intellectual fields as theoretical landscapes. See also Star, S. (1991). "The Sociology of the Invisible," in D. Maines (Ed.), *Social Organization and Social Process* (pp. 265-283), New York: Aldine De Gruyter, for useful methodological "rules of thumb" to study invisible things: 1) The rule of continuity: phenomena are continuous, i.e., in Dewey's words, "experience is a seamless web." There is no such thing as dualism. Objectives, from this point of view are created not by reacting to something, but by overleaving "stratified networks originating from radically different points," and power is understood as "the imposition of a position in such stratified networks" (p. 277); 2) The rule of no omniscience: nobody is exempt from having a viewpoint and everybody has several. Every viewpoint is, accordingly, part of some picture, but not the whole picture. Only in the articulation of viewpoints can we understand anything about truth. Truth is a fundamentally interactional, social phenomenon; 3) The rule of analytical hygiene: Concepts are verbs, not nouns; 4) The rule of soverneignty: Every standpoint has a cost, and 5) The rule of invisibility: Successful claims to pure invisible phenomena require the assertion of power and the subverting of "the fundamental pluralism of human interaction." (p. 279). Star's rules help us track and map invisible work and understand the mechanisms of power tied to the deletion of certain kinds of practical and intellectual work. They also provide a

powerful rational for mapping the work of all players and communities in a field.

23.Additional advantages of two-dimensional inscriptions, or visual displays, are given in a chapter by LaTour, B. (1990), "Drawing things together," in M. Lynch & S. Woolgar (Eds.), *Representation in scientific practice* (pp. 19-68). Cambridge: MIT Press. LaTour notes that "paperwork"--i.e., maps--are mobile, immutable, and flat. Their scale can be modified at will without any change in their internal proportions. They are phenomena that can be dominated with the eyes and held by hands no matter when or where they come from. They can be reproduced and spread at little cost, and since maps/inscriptions are flat, mobile, reproducible, still, and of varying scales, they can be redrawn and recombined. Here LaTour claims that "most of what we impute to connection's in the mind may be explained by this reshuffling of inscriptions that all have the same 'optical consistency.' The same is true of what we call 'metaphor'" (p. 45). With maps one can superimpose several visual displays with different origins and scales. Most of what we call "pattern" and "structure" are consequences of these superimpositions. And as in this study, maps can be made part of a written text. Here the map is not simply an "illustration" but combines earlier texts with optical consistency and semiotic homogeneity. In this way, "the text and the spectacle of the world end up having the same character" (p. 46). Realms of reality that may seem far apart are only inches apart, once flattened out on the same surface. See also Harley, H.B. (1989). "Deconstructing the map." *Cartographica*, 26, pp. 1-20; and Hall, S.S. (1992). *Mapping the next millennium: The discovery of the new geographies*. New York: Random House.

24.See Paulston and Rippberger, pp. 193-194.

25.Bourdieu, P. (1990). *In other words: Essays towards a reflexive sociology* (p. 27). Stanford: Stanford University Press. For a postmarxist critique and refutation of Bourdieu's reflexive practitioner's argument, see Soja, E.W. (1989). *Postmodern geographies: The reassertion of space in critical social theory*. New York, Verso. See especially the section "Materiality and illusion in conceptualization of space," pp. 120-131. Soja calls for "a new 'cognitive mapping' . . . a new way of seeing through the gratuitous veils of both reactionary postmodernism and late modern historicism to encourage the creation of a politicized spatial consciousness and a radical spatial practice. The most important postmodern geographies are thus still to be produced" (p. 73).